

### AMENDMENTS TO THE CLAIMS

1-30: (Canceled)

31. (Currently Amended) A biosensor comprising:

at least one pair of measuring electrodes, wherein the pair of measuring electrodes comprises a first and a second electrode and an insulation layer arranged between the electrodes, wherein one or more nanopores are provided in the second electrode, wherein the nanopores extend through the insulation layer to the first electrode, the surface of which is at least partially uncovered by the nanopores, and wherein the nanopores have an opening width selected from the range of approximately 20 nm to approximately 1000 nm, and wherein the at least one pair of measuring electrodes is arranged on a substrate;  
and

at least one additional electrode arranged on the substrate, wherein the additional electrode serves as a reference electrode or counterelectrode.

32.-33 (Canceled)

34. (Currently Amended) The biosensor according to claim ~~33~~31, wherein the additional electrode has a surface area which is greater than the surface area of the second electrode.

35. (Currently Amended) The biosensor according to claim ~~33~~31, wherein the additional electrode has a surface area which is at least 10 times greater than the surface area of the second electrode.

36. (Currently Amended) The biosensor according to claim 31, wherein the biosensor is ~~designed as a chip with supply lines for the electrodes.~~

37-46: (Canceled)

47. (Previously Presented) An electrochemical cell comprising:  
a biosensor, comprising: ~~wherein the biosensor comprises~~

at least one pair of measuring electrodes, wherein the pair of measuring electrodes comprises a first and a second electrode and an insulation layer arranged between the electrodes, wherein one or more nanopores are provided in the second electrode, wherein the nanopores extend through the insulation layer to the first electrode, the surface of which is at least partially uncovered by the nanopores, and wherein the nanopores have an opening width selected from the

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range of approximately 20 nm to approximately 1000 nm, and wherein the at least one pair of measuring electrodes is arranged on a substrate; and

at least one additional electrode arranged on the substrate, wherein the additional electrode serves as a reference electrode or counterelectrode; and

a receiving space for an electrolyte, wherein the electrolyte comprises molecules to be recorded using the biosensor.

48. (Canceled)

49. (Original) The electrochemical cell according to claim 47, wherein the cell comprises terminals for a readout circuit.

50. (Original) The electrochemical cell according to claim 49, wherein the readout circuit is a potentiostat circuit.

51-81: (Canceled)

82. (Previously Presented) The pair of measuring electrodes according to claim 31, wherein the nanopores have an opening width of approximately 50 nm.

83. (Previously Presented) The pair of measuring electrodes according to claim 31, wherein the nanopores have an opening width of approximately 100 nm.

84. (Previously Presented) The pair of measuring electrodes according to claim 31, wherein the nanopores have an opening width of approximately 200 nm.